PND10

THE AMERICA INSOMNIA SURVEY (AIS): AN EPIDEMIOLOGY STUDY OF INSOMNIA PREVALENCE AND BURDEN IN A REPRESENTATIVE POPULATION

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OBJECTIVES: To investigate the association between insomnia, health care utilization and cost in a representative population. **METHODS:** The America Insomnia Survey (AIS) is an epidemiology study of insomnia prevalence and burden of illness in the US. The Brief Insomnia Questionnaire (BIQ), a fully structured diagnostic interview, was administered to a representative sample of subscribers from 14 geographically dispersed US health plans in the HealthCore Integrated Research Database. The aim was to investigate associations between insomnia and relevant outcomes, (daytime impairment, accidents, injuries, lost productivity, health care consumption). Respondents were medical and pharmacy benefit eligible and had minimum12 months continuous enrollment prior to the survey date. Survey and administrative claims data were merged. Data were analyzed using SAS Genmod with log link and gamma distribution for costs adjusting for Deyo-Charlson Index score. Respondents were classified as 'any insomnia (AI)' and 'no insomnia (NI)' with 'any insomnia' defined as meeting criteria for any of 3 nosologic systems (DSM, ICD, Research Diagnostic Criteria [RDC]). **RESULTS:** Of 10,094 respondents, insomnia prevalence is 23.6%. Of insomnia subtypes alone and in combination, waking in the night is most prevalent (61.5%), followed by waking too early (52.1%), difficulty falling asleep (38.0%) and non-restorative sleep (6.2%). Compared to NI, AI are more often female (58.1% vs. 49.6%; $p < 0.0001$) and younger (45.1 ± 16.6 vs. 46.6 ± 17.6; $p = 0.001$). Preliminary claims analysis suggests within 12 months prior to the survey, AI had significantly higher all-cause medical costs than NI respondents ($4,830 vs. $3,714, respectively; $p < 0.0001$). All-cause pharmacy costs were significantly higher for AI than NI ($1,186 vs. $959, respectively; $p < 0.0001$). **CONCLUSIONS:** The prevalence of insomnia is higher than previously thought with sleep maintenance as the most important symptom. Insomnia accounts for significant health care costs in the US.

PND11

HEALTH ECONOMIC IMPACT OF EARLY TREATMENT OF MULTIPLE SCLEROSIS WITH DISEASE MODIFYING THERAPY

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OBJECTIVES: Assess the impact on health care utilization and expenditures of treating patients early with disease modifying therapy (DMT: interferons or glatiramer acetate) rather than delaying until patients have met full diagnostic criteria of multiple sclerosis (MS). **METHODS:** A retrospective cohort study using insurance claims data from the Marketscan® Research Databases (2001–2008) enrolled patients prior to documented MS (1 inpatient or two outpatient claims with ICD-9-CM 340 on different days). Enrollment criteria were: 1)brain MRI (index date); 2)at least 1 MS symptom 6 months prior or 1 month post on non-diagnostic claim; 3)treated with DMT post index; 4)no documented MS or DMT during the year prior. Treatment cohorts were Early DMT (DMT claim prior to the first documented MS) and Delayed DMT (DMT started after documented MS). Comparisons of hospitalizations and expenditures during the first year of follow-up were adjusted for baseline differences between treatment cohorts using inverse probability of treatment –weighted (IPTW) regression (general linear model for expenditures and logistic for hospitalization). **RESULTS:** There were 227 (5.7%) Early DMT and 3,724 Delayed DMT. Number of days from index until start of DMT therapy was (122 vs. 184, $p < 0.001$) for Early vs. Delayed. Hospitalizations were 10.1% vs. 16.5% (Adjusted OR 0.51, CI: 0.32–0.81). Adjusted per-patient annual expenditures for Early vs. Delayed were: Total: ($28,280 vs. $29,102, $p = 0.44$); Total excluding cost of DMT: ($15,214 vs. $17,630, $p = 0.008$), MS-related ($9,365 vs. $13,661, $p < 0.001$), MS-related excluding cost of DMT ($988 vs. $4,907, $p < 0.001$). **CONCLUSIONS:** Early treatment with DMT was associated with fewer hospitalizations and lower MS-related expenditures. Although overall expenditures were not significantly different, non-DMT expenditures were lower in the early DMT cohort. This indicates that the higher drug expenditures of early treatment with DMT were offset by savings in other medical expenditures.

PND12

THE COST-EFFECTIVENESS OF XEOMIN® IN CERVICAL DYSTONIA AND BLEPHAROSPASM IN SWEDEN

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OBJECTIVES: The objective of this study was to assess the cost-effectiveness of Xeomin® compared to placebo in the management of cervical dystonia (CD) and blepharospasm (BP) from a Swedish NHS perspective. **METHODS:** The Country Council in Uppsala requested a cost utility analysis (CUA) be performed to assess the cost-effectiveness of Xeomin® compared to placebo for the management of CD and BP. The economic evaluation uses a Markov model to follow Xeomin® patients through six health states of a Markov process in cycle lengths equivalent to the time between Xeomin® injections (12 weeks). The duration of the model is 16 cycles (192 weeks), consistent with the data sources upon which the model is based. The model includes six broad variables categories: Xeomin® utilisation and cost; resource utilisation and unit costs; utility valuation and QALY calculation; discontinuation; adverse events and discounting. The structure of the economic evaluation is consistent across the two indications. Direct costs were assigned in 16 cycles with the effect on quality-adjusted life years (QALYs), using data from a prospective, open-labelled cohort study. All costs and QALYs accruing after the first year of the economic evaluation are discounted at 3.0% per annum in accordance with the LFN guidelines. Univariate sensitivity analyses were conducted in line with these guidelines. **RESULTS:** Xeomin® was cost-effective versus placebo, with an incremental cost per QALY gained of SEK 94,317 in CD and SEK 119,182 in BP. Results held under sensitivity analyses. **CONCLUSIONS:** Xeomin® is a cost-effective treatment option relative to placebo for patients with CD and BP in Sweden. Xeomin® has the added benefits of i) not requiring cold chain storage, and ii) its potential lower immunogenicity.

PND13

A SYSTEMATIC REVIEW OF ECONOMIC ANALYSES OF RASAGILINE AND ENTACAPONE IN PARKINSON'S DISEASE

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OBJECTIVES: To systematically review pharmacoeconomic evaluations of Rasagiline and Entacapone as adjunct therapies in Parkinson's disease. **METHODS:** A systematic literature search was conducted by one researcher among publications in peer-reviewed journals from January 2000 to January 2009. Search was conducted using Pubmed to identify economic studies that investigated the use of Rasagiline or Entacapone in Parkinson's disease. Key search terms included Rasagiline, Entacapone, economic analyses, cost-effectiveness, cost, decision models and various combinations of search terms. Economic studies of Rasagiline and Entacapone used as monotherapies or in combination with Levadopa were included in the review. Review papers were not included in the review. The Quality of Health Economic Studies (QHES) instrument ranks the quality of economic studies on sixteen criteria and was utilized to assess the comprehensiveness of the economic evaluations. **RESULTS:** The systematic literature search yielded seven studies. Only five studies met the inclusion criteria. One study compared Rasagiline with Pramipexole (payer perspective—NHS, UK), one study compared a combination of Rasagiline and Levadopa with Levadopa alone (societal and payer), and the remaining studies compared a combination of Entacapone and Levadopa with Levadopa alone (societal and payer). All the studies used decision models and the analytical time frame ranged from one year to 10 years. Outcomes were presented in terms of cost savings and cost/QALYs and were found to be below the accepted threshold of $50,000 and €25,000. **CONCLUSIONS:** The economic analyses of Rasagiline and Entacapone demonstrate cost savings and QALY gains in Parkinson's disease. Since the studies are conducted in different countries, decision makers have to evaluate the population characteristics, model parameters, study assumptions and methodologies in order to make appropriate adjunct therapy decisions in Parkinson's disease.

PND14

COST-UTILITY ANALYSIS ON HYPOTHETICAL NEUROIMAGING TRACER FOR DIAGNOSIS OF DEMENTIA OF ALZHEIMER TYPE IN JAPAN

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OBJECTIVES: To examine the cost-utility of two diagnosis strategies utilizing a hypothetical neuroimaging tracer in patients with dementia of Alzheimer type relative to a standard diagnosis procedure from a Japanese payer's perspective. **METHODS:** A cost-utility analysis was performed to evaluate the cost and outcomes associated with Dementia of Alzheimer Type (DAT), comparing DAT patients aged over 65 years on a standard clinical path to those on a hypothetical Positron Emission Tomography (PET) path. A decision tree structure was utilized to simulate follow-up through 20 years, and a state-transition Markov model was developed to estimate the long-term outcomes. Direct medical costs and quality-adjusted life-years (QALYs) were estimated for two diagnosis strategies: 1) PET for all patients, and 2) standard diagnosis. Model parameters were derived from the published literature, and National Health Insurance data. The model included effectiveness of drug treatment, and costs related to the treatment and post-progression care. The model results were examined using one-way sensitivity analysis. **RESULTS:** Preliminary analyses indicate that total QALYs for the PET for all, and standard diagnosis strategies were 2.662 and 2.503, respectively. Estimated total costs were $23,931, and $21,630, respectively. The incremental cost effectiveness ratio (ICER) was estimated to be $14,401 per QALY gained. Sensitivity analyses suggest that the most influential parameters are the accuracy of PET tracer, effectiveness of drug treatment, and cost of care. When the hypothetical diagnostic drug is assumed to perform as good as standard diagnosis, the ICER increases to $97,058 per QALY. **CONCLUSIONS:** These results suggest that the introduction of a PET tracer for this patient population is potentially cost-effective by common standards of willingness-to-pay in major developed nations. Ongoing efforts are focused on refining model inputs and implementing probabilistic sensitivity analysis.